

### REMARKS/ARGUMENTS

The claims are 23, 25-31 and 33-37. Claims 23, 25, 27, 29, 33, 34, 35 and 37 have been amended to better define the invention. Support for the claims may be found, *inter alia*, in the disclosure at page 22, first full paragraph and FIGS. 3b and 4. Reconsideration is expressly requested.

Claims 23, 25, 27, 29, 33, 35 and 37 were objected to because of the informalities set forth on pages 2-4 of the Office Action. In response, Applicants have, *inter alia*, amended these claims to correct these informalities as requested by the Examiner.

Claims "23-32" (presumably claims 23 and 25-31, as claims 24 and 32 were previously canceled) were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the reasons set forth on pages 4-5 of the Office Action. Specifically, the Examiner requested clarification as to whether the recitation "one purely imaginary spectrum ( $p_2$ )" in claim 23, line 8, is the same as the "purely imaginary transmission function ( $p_2$ )" in lines

16 and 30 of that claim. In addition, the Examiner said that "RSB" in the terms "RSB filtering" in claim 23, line 16, and "RSB demodulation" in claim 23, line 36 was unclear as to what RSB means. The Examiner also said that it was unclear what flanks  $\omega_g/2$  and  $\omega_g$  are in the recitations in lines 37-39 of claim 23 "the Nyquist flanks lie symmetrical to  $\omega_g/2$  for the upper flank of  $p_1$  and the lower flank of  $p_2$ , and lie at  $\omega_g$  for the upper flank of  $p_2$ ."

In response, with respect to the Examiner's request for clarification as to whether the recitation "one purely imaginary spectrum ( $p_2$ )" in claim 23, line 8, is the same as the "purely imaginary transmission function ( $p_2$ )" in lines 16 and 30 of that claim, Applicants have amended claim 23 to change "purely imaginary transmission function" to -- purely imaginary spectrum -- in line 17 of claim 23.

With respect to the Examiner's request for clarification as to what "RSB" means in the terms "RSB filtering" in claim 23, line 16 and "RSB demodulation" in claim 23, line 36, Applicants

have changed "RSB" to -- remaining side band (RSB) -- in line 16 of amended claim 23 and have changed "RSB demodulation" to -- RSB filtering -- in line 37 of amended claim 3 and in line 8 of amended claim 29.

With respect to the Examiner's request for clarification as to what the flanks  $\omega_g/2$  and  $\omega_g$  are in the recitations in lines 37-39 of claim 23 "the Nyquist flanks lie symmetrical to  $\omega_g/2$  for the upper flank of  $p_1$  and the lower flank of  $p_2$ , and lie at  $\omega_g$  for the upper flank of  $p_2$ " Applicants have amended the end of claim 23 to read:

"wherein the at least one purely real spectrum ( $P_1$ ) has an upper flank and the at least one purely imaginary spectrum ( $P_2$ ) has an upper flank and a lower flank; and

wherein ~~the~~ roots of the Nyquist flanks lie symmetrical to a frequency  $\omega_g/2$  for the upper flank of  $P_1$  and the lower flank of  $P_2$ , and lie at  $\omega_g$  for the upper flank of  $P_2$ ."

The references to the Nyquist flank in the last part of claim 23 can be seen from FIG. 4. The data stream in series is separated into two parallel data streams having each the same bit rates, which then are sent over different filters ( $P_1$  and  $P_2$ ). These two bit streams are not sent over an ideal low pass (eventually with Nyquist flank) and cascaded in other filters, but rather are routed directly over the low pass filter  $P_1$  and the high pass filter  $P_2$ .

The depictions in FIG. 4 show how one gets from a low pass  $H_1$  with a border frequency of  $\omega_g$  to the two filters. The impulse answer of the low pass  $H_1$  has zero passages at the multitude of  $1/2f_g$  and, therefore, of course also at the multitude of  $1/f_g$ .  $P_1^2$  and  $P_2P_2^*$  have half of the bandwidth. Therefore, the zero positions at the multitude of  $1/f_g$  are double as wide. The different impulse answers may be seen from FIG. 3b, which also shows that transfer is possible only with the bit rate  $f_g$  instead of with  $2f_g$ .

It is respectfully submitted that all currently pending claims fully comply with 35 U.S.C. 112, second paragraph, and

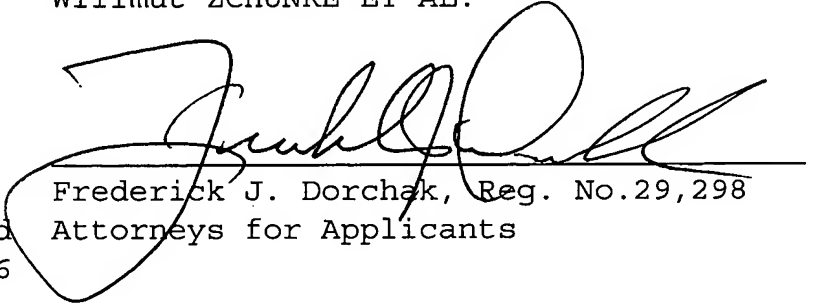
Applicants respectfully request that the rejection on that basis be withdrawn.

As the Examiner has indicated that claims 25-31 and 33-37 contain allowable subject matter, and as it is respectfully submitted that Applicants have amended claim 23 on which these claims directly or indirectly depend to overcome the Examiner's rejection under 35 U.S.C. 112, second paragraph, it is respectfully submitted that these claims are now in condition for allowance. In addition, it is respectfully submitted that claim 23 is also in condition for allowance.

In summary, claims 23, 25, 27, 29, 33-35 and 37 have been amended. In view of the foregoing, it is respectfully requested that the claims be allowed and that this case be passed to issue.

Respectfully submitted,  
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 2, 2008.



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